



FORM PTO - 100 INFORMATION DISCLOSURE STATEMENT				ATTORNEY DOCKET NO.: MIT-160 APPLICANT(S): Ariel <i>et al.</i> SERIAL NO.: 10/823,083 FILING DATE: April 13, 2004 GROUP: 1745					
U.S. PATENT DOCUMENTS									
EXAM. INIT.	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE			
/RH/	A1	5,985,485	11/16/1999	Ovshinsky <i>et al.</i>					
/RH/	A2	6,242,132	06/05/2001	Neudecker <i>et al.</i>					
FOREIGN PATENT DOCUMENTS									
EXAM. INIT.	DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG (Y/N)	
/RH/	B1	01/73864	10/04/2001	WO			N	Y	
/RH/	B2	97/19481	05/29/1997	WO			N	Y	
/RH/	B3	01/80338	10/25/2001	WO			N	Y	
OTHER ART, JOURNAL ARTICLES, ETC.									
EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)								
/RH/	C1	Akridge and Balkanski, <i>Solid State Microbatteries</i> , Plenum press, (1988).							
	C2	Antolini, "Preparation and Properties of Li-Co-O Compounds," <i>J. of the European Ceramic Soc.</i> 18 (1998), pp 1405-1411.							
	C3	Balkanski, <i>et al.</i> , "Integrable Lithium Solid-State Microbatteries," <i>J. of Power Sources</i> , Vol. 26 (1989) pp. 615-622.							
	C4	Balkanski, "Solid-state microbatteries for electronics in the 21 st century," <i>Solar Energy Materials and Solar Cells</i> , 62 (2000), pp 21-35.							
	C5	Barin, <i>Thermochemical Data Of Pure Substances</i> , 3rd edition, Weinheim, NY, (1995).							
	C6	Bates <i>et al.</i> , "Thin-film rechargeable lithium batteries," <i>J. of Power Sources</i> , 54 (1995), pp 58-62.							
	C7	Bates <i>et al.</i> , "Thin-film lithium and lithium-ion batteries," <i>Solid State Ionics</i> , 135 (2000), pp 33-45.							
↓	C8	Bates <i>et al.</i> , "Rechargeable Thin-Film Lithium Microbatteries," <i>Solid State Technology</i> , (1993) pp 59-64.							
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/RH/	C9	Benqlilou-Moudden <i>et al.</i> , "Amorphous lithium cobalt and nickel oxides thin films: preparation and characterization by RBS and PIGE," <u>Thin Solid Films</u> , 333 (1998), pp 16-19.								
	C10	Bonino <i>et al.</i> , "Rechargeable lithium batteries based on $\text{Li}_{1+x}\text{V}_3\text{O}_8$ thin films," <u>J. of Power Sources</u> , 56 (1995), pp 193-196.								
	C11	Boukamp <i>et al.</i> , "All-Solid Lithium Electrodes with Mixed-Conductor Matrix," <u>J. of Electrochem. Soc.</u> , 128, (4), (1981), pp 725-729.								
	C12	Bourderau <i>et al.</i> , "Amorphous silicon as a possible anode material for Li-ion batteries," <u>J. of Power Sources</u> , 81-82, (1999), pp 233-236.								
	C13	Brousse <i>et al.</i> , "All oxide solid-state lithium-ion cells," <u>J. of Power Sources</u> , 68 (1997), pp 412-415.								
	C14	Calister, <u>Introduction to Materials Science and Engineering</u> , 3rd edition, Wiley, NY, (1994).								
	C15	Campbell <i>et al.</i> , "The electrochemical behaviour of tetrahydrofuran and propylene carbonate without added electrolyte," <u>J. Electroanal. Chem.</u> , 284 (1990) pp. 195-204.								
	C16	Chromik <i>et al.</i> , "Thermodynamic and kinetic study of solid state reactions in the Cu-Si system," <u>J. of App. Phys.</u> , 86 (8), (1999), pp 4273-4281.								
	C17	Contestabile <i>et al.</i> , "A laboratory-scale lithium-ion battery recycling process," <u>J. of Power Sources</u> , 92, (2001) pp 65-69.								
	C18	Czyzyk <i>et al.</i> , "Band-theory description of high-energy spectroscopy and the electronic structure of LiCoO_2 ," <u>Phys. Rev. B</u> , 46 (7), (1992), pp 3729-3735.								
	C19	Dudney <i>et al.</i> , "Sputtering of lithium compounds for preparation of electrolyte thin films," <u>Solid State Ionics</u> , 53-56, (1992) pp 655-661.								
↓	C20	Ferg <i>et al.</i> , "Spinel Anodes for Lithium-Ion Batteries," <u>J. Electrochem. Soc.</u> , 141, (11), pp 147-150.								
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EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)								
/RH/	C21	Fuller and Severiens, "Mobility of Impurity Ions in Germanium and Silicon," <u>Phys. Rev.</u> , 96 (1), (1954), pp. 21-24							
	C22	Gao <i>et al.</i> , "Alloy Formation in Nanostructured Silicon," <u>Adv. Mat.</u> , 13, (11), (2001), pp 816-819.							
	C23	Goldner <i>et al.</i> , "Development of a Thin Film Li _{1-x} CoO ₂ /Li _x C ₆ Rocking-chair Battery," <u>Electrochem. Soc. Proc.</u> , 95-22, (1996), pp 173-182.							
	C24	Groenert <i>et al.</i> , "Strategies for Direct Monolithic Integration of Al _x Ga _(1-x) As/In _x Ga _(1-x) As LEDS and Lasers on Ge/GeSi/Si Substrates Via Relaxed Graded Ge _x Si _(1-x) Buffer Layers" <u>Proceedings of fall MRS</u> , Boston 2001.							
	C25	Jones and Akridge, "Development and performance of a rechargeable thin-film solid-state microbattery," <u>J. of Power Sources</u> , 54 (1995), pp 63-67.							
	C26	Julien <i>et al.</i> , "Transport and Structure of Glasses for Microbattery Applications," <u>Glasses for Electronic Applications</u> , Ceramic Trans. 20, Ed. K.M. Nair, American Ceramic Soc., (1991), pp 51-84.							
	C27	Julien <i>et al.</i> , "Fabrication of LiCoO ₂ thin-film cathodes for rechargeable lithium microbatteries," <u>Mat. Chemistry and Physics</u> , 68 (2001), pp 210-216.							
	C28	Julien <i>et al.</i> , "Growth of LiMn ₂ O ₄ thin films by pulsed-laser deposition and their electrochemical properties in lithium microbatteries," <u>Mat. Sci. and Eng.</u> , B72 (2000), pp 36-46.							
	C29	Julien <i>et al.</i> , "Combustion synthesis and characterization of substituted lithium cobalt oxides in lithium batteries," <u>Solid State Ionics</u> , 135 (2000), pp 241-248.							
	C30	Huggins, "Lithium alloy negative electrodes," <u>J. of Power Sources</u> , 81-82, (1999), pp 13-19.							
	C31	Kondo, "All Solid-State Lithium Secondary Battery with Highly Ion Conductive Glassy Electrolyte," <u>Lithium Ion Batteries</u> , Chapter 9, pp 199-216.							
	C32	Lai, "Solid Lithium-Silicon Electrode," <u>J. of Electrochem. Soc.</u> , 123 (8), (1977), pp 1196-1197.							
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/RH/	C33	Lee <i>et al.</i> , "Strained Ge channel <i>p</i> -type metal-oxide-semiconductor field-effect transistors grown on Si _(1-x) Ge _x /Si virtual substrates," <u>App. Phys. Lett.</u> , Vol. 79, No. 20, (2001), pp 3344-3346.							
	C34	Lee <i>et al.</i> , "All-Solid-State Rocking Chair Lithium Battery on a Flexible Al Substrate," <u>Electrochem. and Solid State Lett.</u> , 2 (9), (1999), pp 425-427.							
	C35	Li <i>et al.</i> , "Direct Imaging of the Passivating Film and Microstructure of Nanometer-Scale SnO Anodes in Lithium Rechargeable Batteries," <u>Electrochem. and Solid State Lett.</u> , 1 (6), (1998), pp 241-243.							
	C36	Li <i>et al.</i> A High Capacity Nano-Si Composite Anode Material for Lithium Rechargeable Batteries," <u>Electrochem. and Solid State Lett.</u> , 2 (11), (1999), pp 547-549.							
	C37	Li <i>et al.</i> , "The crystal structural evolution of nano-Si anode caused by lithium insertion and extraction at room temperature," <u>Solid State Ionics</u> , 135, (2000), pp 181-191.							
	C38	McGraw <i>et al.</i> , "Next generation V ₂ O ₅ cathode materials for Li rechargeable batteries," <u>Solid State Ionics</u> , 113-115, (1998), pp 407-413.							
	C39	Nesper, <i>et al.</i> , "Li ₂₁ Si ₅ , a Zintl Phase as Well as a Hume-Rothery Phase," <u>J. of Solid State Chemistry</u> , 70, (1987) pp 48-57.							
	C40	Neubert, <i>et al.</i> , "Mass Spectrometric Determination of the Dissociation Energies of the Molecules CuLi, AgLi and AuLi," <u>Dissociation Energies</u> , (1974) pp 2219-2223.							
	C41	Neudecker <i>et al.</i> , "Lithium silicon tin oxynitride (Li ₃ SiTON): high-performance anode in thin-film lithium-ion batteries for microelectronics," <u>J. of Power Sources</u> , 81-81 (1999), pp 27-32.							
	C42	Ng <i>et al.</i> , "Si-O network encapsulated graphite-silicon mixtures as negative electrodes for lithium-ion batteries," <u>J. of Power Sources</u> , 94, (2001), pp 63-67.							
	C43	Park <i>et al.</i> , "All-Solid-State Lithium Thin-Film Rechargeable Battery with Lithium Manganese Oxide," <u>Electrochem. and Solid State Lett.</u> , 2 (2), (1999), pp 58-59.							
↓	C44	Pell, "Diffusion of Li in Si at High <i>T</i> and the Isotope Effect," <u>Phys. Rev.</u> , 119 (3), (1960), pp. 1014-1021.							
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/RH/	C45	Pell, "Diffusion Rate of Li in Si at Low Temperatures," <u>Phys. Review</u> , 119, (4), (1960), pp 1222-1225.							
	C46	Robertson <i>et al.</i> , "Ion beam analysis of lithium-ion conducting amorphous electrolyte films," <u>Nuclear Instruments and Methods in Physics Research</u> , B56/57 (1991), pp 722-725.							
	C47	Scrosati, "Recent advances in lithium ion battery materials," <u>Electrochimica Acta</u> , 45 (2000), pp 2461-2466.							
	C48	Seefurth <i>et al.</i> , "Investigation of Lithium Utilization from A Lithium-Silicon Electrode," <u>J. of Electrochem. Soc.</u> , 124 (8), (1977), pp 1207-1214.							
	C49	Severiens and Fuller, "Mobility of Impurity Ions in Germanium and Silicon," <u>Phys. Rev.</u> , 92 (5), (1953), pp. 1322-1323.							
	C50	Sharma <i>et al.</i> , "Thermodynamic Properties of the Lithium-Silicon System," <u>J. of Electrochem. Soc.</u> , 123, (12), (1976), pp 1763-1768.							
	C51	Subbarao <i>et al.</i> , "Advances in Ambient Temperature Secondary Lithium Cells," <u>J. of Power Sources</u> , 29 (1990), pp 579-587.							
	C52	Sze, "Diffusion in SiO ₂ ," <u>VLSI Technology</u> , 2 nd edition, McGraw-Hill, NY, (1998) pp 204-209, and 154-157.							
	C53	Taraschi <i>et al.</i> , "Relaxed SiGe-on insulator fabricated via wafer bonding and etch back," <u>J. Vac. Sci Technol.</u> , B20 (2) accepted April 2002, pp 725-727.							
	C54	Thackeray <i>et al.</i> , "Lithium Insertion into Manganese Spinels," <u>Mat. Res. Bull.</u> , 18, (1983), pp 461-472.							
	C55	Van der Ven <i>et al.</i> , "Phase transformations and volume changes in spinel Li _x Mn ₂ O ₄ ," <u>Solid State Ionics</u> , 135, (2000), pp 21-32.							
	C56	Vaughey <i>et al.</i> , "Intermetallic Insertion Electrodes for Lithium Batteries," <u>Electrochem. Soc. Proc.</u> , 99-24, (2000), pp 280-289.							
✓	C57	Wang <i>et al.</i> , "Characterization of Thin-Film Rechargeable Lithium Batteries with Lithium Cobalt Oxide Cathodes," <u>J. of Electrochem. Soc.</u> , 143 (10), (1996) pp 3203-3213.							
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EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)								
/RH/	C58	Wen <i>et al.</i> , "Chemical Diffusion in Intermediate Phases in the Lithium-Silicon System," <u>J. of Solid State Chem.</u> , 27, (1981), pp 271-278.							
	C59	Weppner <i>et al.</i> , "Determination of the Kinetic Parameters of Mixed-Conducting Electrodes and Application to the System Li ₃ Sb," <u>J. of Electrochem. Soc.</u> , 124 (10), (1997), pp 1569-1578.							
	C60	Weydanz <i>et al.</i> , "A room temperature study of the binary lithium-silicon and the ternary lithium-chromium-silicon system for use in rechargeable lithium batteries," <u>J. of Power Sources</u> , 81-82 (1999), pp 237-242.							
	C61	Whittingham <i>et al.</i> , "25 Years of Intercalation Chemistry for Battery Materials," <u>Electrochem. Soc. Proc.</u> , 99-24, pp 15-28.							
	C62	Yang <i>et al.</i> , "Monolithic integration of III-V optical interconnects on Si using SiGe virtual substrates," <u>J. of Mat. Sci. electronic materials</u> , submitted 2002, pp 377-380.							
	C63	Yao <i>et al.</i> , "Studies of electrochemical properties of lithium cobalt oxide," <u>J. of Power Sources</u> , 54 (1995), pp 491-493.							
	C64	Y-Schacham-Diamand <i>et al.</i> , "Copper Transport in Thermal SiO ₂ ," <u>J. of Electrochem. Soc.</u> , 140 (8), (1993), pp 2427-2432.							
	C65	Yu <i>et al.</i> , "A Stable Thin-Film Lithium Electrolyte: Lithium Phosphorus Oxynitride," <u>J. Electrochem. Soc.</u> , 144 (2), (1997), pp 524-532.							
↓	C66	Zhou <i>et al.</i> , "Controlled Li doping of Si nanowires by electrochemical insertion method," <u>Appl. Phys. Lett.</u> , 75 (16), (1999), pp 2447-2449.							
	C67	International Search Report and Written Opinion for PCT-US2004/093223, May 10, 2005, 10 pages.							
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